

CLIMATOLOGICAL DATA FOR SEPTEMBER, 1912.

DISTRICT No. 12, COLUMBIA RIVER.

EDWARD A. BEALS, District Editor.

Although the month averaged considerably cooler than usual this fact attracted but little attention on account of there being no very low temperatures. During the coldest weather clouds prevailed generally and the frosts that occurred were not damaging, except in a few exposed localities. Late crops matured nicely, and the season, notwithstanding the unusually heavy rains in midsummer, has been a prosperous one for the farmer. The lack of rain during the latter part of the month hindered fall plowing, and this work is not so far advanced as it was a year ago at this time. The weather was favorable for construction work, and there were no storms to interfere with the carrying trade either on land or sea. Country roads were good, which facilitated the hauling of produce to the railways and to city markets. There were scarcely any forest fires and the atmosphere was much clearer than usual at this time of year.

TEMPERATURE.

Mean temperatures averaged between 50° and 60° over most of the district during September. Stations in the Montana and Wyoming watersheds, in southeastern Idaho, and central Oregon reported mean temperatures under 50°. The highest mean temperatures of the month were from 62° to 64° and occurred in the Columbia River district of eastern Oregon and southeastern Washington. The only portion of the district where temperatures were normal or above lay in western Washington and in a few localities in western Oregon. Everywhere to the east of the Cascade Mountains the weather was abnormally cool. In Idaho the mean temperature for the State was the lowest ever recorded. There was no hot weather in the district during the month and maximum temperatures above 90° were the exception. Freezing temperatures were reached at nearly all places east of the Cascades, except in southeastern Washington and along the Columbia River in Oregon. The lowest temperatures occurred mainly between the 20th and 25th.

The mean temperature as determined from 256 stations was 55°, or 2.2° below the normal. The highest mean temperature was 64.9° at Blalock, Oreg., and the highest maximum temperature was 94° at Dent, Wash., on the 11th. The lowest mean temperature was 40.3° at Piereson, Idaho, and the lowest minimum was 10° at the same place on the 8th.

PRECIPITATION.

General rains fell during the first eight days of September in western Oregon and western Washington. Showers were light and infrequent in eastern Washington and eastern Oregon. In Idaho precipitation was rather evenly distributed and was about normal in amount. It

was slightly above normal in the Montana watershed and occurred mostly in two periods, viz, from the 1st to 8th, and from the 22d to 24th, inclusive. The total amounts for the month ranged from 5 inches on the Oregon coast to very light showers or none at all in portions of central Oregon and central Washington.

The average precipitation determined from 360 stations was 1.22 inches, or 0.26 inch below the normal. The largest monthly amount was 6.48 inches at Quiniault, Wash., and the largest 24-hour amount was 2.69 inches at Siskiyou, Oreg., on the 6th. No precipitation occurred during the month at Nutland, Wash., and Glencoe and Brogan, Oreg. Three inches of snow fell at Musick, Oreg., on the 2d, and many observers reported snow as visible on the mountains near their stations on the same date.

MISCELLANEOUS PHENOMENA.

Killing frosts were experienced at a number of highly elevated stations, but little damage was reported, except to grain in the high latitudes of Idaho. A strong east wind swept down the Columbia from near the mouth of the Snake River to the sea on the 14th. It filled the air with dust which obscured the sun at some places. High wind velocities occurred at Lewiston, Tatoosh Island, and North Head. The maximum velocity at North Head for a period of five minutes was 64 miles per hour from the southeast. Fog occurred on several dates at Portland and Roseburg, and was of frequent occurrence at coast stations and on Puget Sound.

THE RIVERS.

The Willamette River averaged 1.3 feet above normal. Light rains early in the month produced a general rise, and the highest readings were recorded on the 10th and 11th. At Salem the highest reading was 3.6 feet on the 10th, and at Portland 6.4 feet was reached on the same date. The lowest gage reading at Salem was only 0.3 foot on the last three dates of the month, and at Portland the lowest was 3 feet on the 21st.

The Columbia River averaged slightly above normal and its mean for the month was about 2½ feet lower than the mean for August. The highest water at Cascade Locks was 7.3 feet on the 2d and 3d, and the highest at Vancouver was 5.7 feet on the 10th. The lowest water at Cascade Locks was 3.4 feet on the 30th, and the lowest at Vancouver was 2.8 feet on the 21st and 30th.

The Snake River averaged nearly 2 feet above normal, and 1 foot higher than during the preceding month. Its flow was least at the beginning of the month, and the greatest from the 10th to 20th, with a slightly diminished flow thereafter. The highest reading at Lewiston was

3.3 feet on the 17th and 18th, and the lowest was 2 feet on the 1st and 2d.

. SAMUEL L. BROOKS.

Mr. Samuel L. Brooks, the oldest cooperative observer in length of service in Oregon, died on September 8, 1912. He was nearly 82 years old, having been born in Burton, Ohio, on November 8, 1830. When a small child his parents moved to Beardstown, Ill., where his boyhood was spent. In 1850 the family came across the plains to Oregon and located on a "homestead" on the site of the present town of Brooks. About 1860 Mr. Brooks moved to The Dalles, Oreg., where he resided continuously until the time of his death.

He began keeping a record of the weather for his own pleasure with instruments purchased by himself in 1874, and he kept it with painstaking care continuously from that date until the day before he died. Mr. Brooks was among the first of the observers to cooperate with the Weather Bureau, and his long record is the most valuable one in the State, as it was kept by the same person and in the same place throughout its length.

Copies of his records are on file at the central office of the Weather Bureau in Washington, D. C., and at the local Weather Bureau office in Portland, Oreg. The originals have been donated to the Oregon Historical Society. They consist of the usual weather and temperature data, and in addition barometer readings, wind velocities, river stages, and copious phenological notes.

TABLE 1.—Climatological data for September, 1912. District No. 12, Columbia Valley.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, 0.01 inch or more.				
<i>Montana.</i>																			
Anaconda.	Deer Lodge.	5,300	10	45.8	-2.8	75	30	21	29	44	2.26	+0.99	1.32	0.2	11	10	12	C. D. Demond.	
Butte.	Silver Bow.	5,716	17	45.8	-2.8	73	30	21	29	49	0.95	-0.24	0.65	T.	3	8	10	J. R. Wharton.	
Columbia Falls.	Flathead.	3,100	16	48.7	-4.1	78	12	25	21	49	1.50	+0.64	0.55	0	9	16	2	J. M. Grist.	
Conomo.	Ravalli.	3,700	3	49.0	-	74	18	28	15	35	1.23	-	0.77	0	15	6	9	Hiram Platt.	
Dayton.	Flathead.	7	50.0	-	-	70	17†	29	29	34	0.80	-	0.30	0	3	19	9	A. J. Ruechell.	
East Anaconda.	Deer Lodge.	5,500	6	46.0	-	74	30	27	29	38	2.03	-	1.10	T.	7	10	8	C. D. Demond.	
Fortine.	Lincoln.	2,975	6	46.6	-	73	11†	17	30	55	1.62	-	0.49	0	11	13	6	Mike Petery.	
Hamilton.	Ravalli.	3,575	9	48.6	-7.6	74	12	29	30	44	1.10	+0.19	0.56	0	6	16	2	Hamilton Chamber of Commerce.	
Hat Creek.	Powell.	6,000	2	-	-	-	-	-	-	-	2.75	-	0.83	5.9	13	7	9	M. K. Landreth.	
Haugan.	Missoula.	3,150	-	47.9	-	80	11	19	21	53	1.20	-	0.58	0	8	17	5	U. S. Forest Service.	
Heron.	Sanders.	2,261	-	51.5	-	80	11	27	21	44	1.93	-	0.43	0	9	17	4	E. Knott.	
Kalispell.	Flathead.	2,965	13	48.4	-5.5	73	12	28	15	38	0.68	-0.65	0.22	0	10	15	8	U. S. Weather Bureau.	
Libby.	Lincoln.	2,055	2	49.8	-	80	12	20	28†	53	1.30	-	0.68	0	7	14	4	U. S. Forest Service.	
Lost Creek.	Deer Lodge.	5,200	2	-	-	-	-	-	-	-	2.22	-	1.11	1.0	8	11	8	Frank Henault.	
Missoula.	Missoula.	3,225	32	50.2	-5.4	88	30	25	21	56	1.58	+0.34	0.42	10	2	se.	U. S. Weather Bureau.		
Ophir.	Powell.	6,800	3	-	-	-	-	-	-	-	4.50	-	1.03	T.	11	10	18	E. S. Wilton.	
Ovando.	do.	4,207	12	45.3	-4.9	71†	30	22†	29	47†	1.52	+0.16	0.60	2.0	10	15†	6†	S. B. Muchmore.	
Philipsburg.	Granite.	5,275	8	-	-	-	-	-	-	-	1.73	-	-	-	-	-	G. T. Bramble.		
Plains.	Sanders.	2,473	13	50.4b	-4.9	78†	12	29†m	21	41†	1.09	+0.41	0.50	0	9	4m	9m	James M. Self.	
Pleasant Valley.	Flathead.	3,500	4	44.7	-	76	12	11	29	55	0.76	-	0.27	0	9	13	6	A. D. Stilman.	
Polson.	do.	2,920	4	51.2	-	76	22	32	16†	44	1.57	-	0.60	0	6	3	22	F. P. Brown.	
Saint Ignatius.	Missoula.	2,700	6	49.4	-	79	12	26	21†	40	1.64	-	0.41	0	9	14	0	U. S. Reclamation Service.	
Saltrese.	do.	3,600	7	-	-	-	-	-	-	-	1.38	-	0.76	0	3	20	2	E. K. Tarbox.	
Stevensville.	Ravalli.	-	-	48.7	-	76	30	26	21†	45	1.13	-	0.43	0	7	20	2	University Orchard Co.	
Thompson Falls.	Sanders.	2,462	-	52.0	-	81	11	26	21	47	1.16	-	0.31	0	10	16	10	U. S. Forest Service.	
Willow Glen Stock Farm.	Deer Lodge.	5,064	1	44.1	-	70	17	15	29	47	-	-	-	8	5	17	G. E. Luce.		
<i>Wyoming.</i>																			
Afton.	Uinta.	6,200	8	48.4	-3.9	86	2†	19	23	54	1.28	+0.28	0.36	2.0	8	19	5	A. V. Call.	
Alta.	do.	7,000	2	43.0	-	70	2†	13	21	45	1.48	-	0.44	3.0	7	8	9	Mrs. Lucy Brown.	
Bechler River.	Yellowstone Park.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U. S. Army.		
Bedford.	Uinta.	5,900	12	44.2	-6.8	72	2	16	21	46	1.14	+0.24	0.36	3.7	10	18	6	C. G. Heiner.	
Moran.	do.	4,226	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U. S. Reclamation Service.		
Snake River.	Yellowstone Park.	7,000	6	43.6	-	68	2†	18	2	40	1.32	-	0.47	0.4	10	13	11	U. S. Army.	
<i>Nevada.</i>																			
San Jacinto.	Elko.	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	F. W. Merchant.		
<i>Utah.</i>																			
Standrod.	Boxelder.	-	7	50.0	-	77	30	26	15†	40	0.66	-	0.30	0	7	18	5	T. B. Jones.	
<i>Idaho.</i>																			
Albion.	Cassia.	4,650	10	-	-	-	-	-	-	-	1.10	-	0.61	T.	4	22	4	C. E. Bocock.	
Almo.	do.	3	-	-	-	-	-	-	-	-	-	-	0.21	0	6	20	10	Wm. D. Cahoon.	
American Falls.	Oneida.	4,341	21	51.4	-6.2	87	21	24	15†	56	0.82	+0.15	0.52	0	4	26	2	Geo. Stoll.	
Arrowrock.	Boise.	3,100	-	58.4	-	80	30	30	25	47	0.87	-	0.52	0	4	15	13	U. S. Reclamation Service.	
Blackfoot.	Bingham.	4,503	16	48.9b	-7.9	79	2	21d	21	47d	0.27	-0.25	0.11	0	4	15	2	E. A. Dowd.	
Blackfoot Dam.	Bannock.	6,200	3	46.7	-	75	2†	14	21	47	1.06	-	0.40	0	9	12	3	S. C. Waddell.	
Bogus Creek.	Boise.	4,200	4	-	-	-	-	-	-	-	-	-	-	-	-	-	F. P. Ingraham.		
Boise.	Ada.	2,739	27	57.7	-4.2	85	30	37	24	38	0.77	+0.36	0.51	0	3	17	6	U. S. Weather Bureau.	
Bonners Ferry.	Bonner.	1,850	5	-	-	-	-	-	-	-	-	-	-	-	-	-	W. H. Heideman.		
Boulder Mine.	Boise.	4,800	3	-	-	-	-	-	-	-	-	-	-	-	-	-	Patrick Moriarty.		
Buhl.	Twin Falls.	3,800	5	55.4	-	82	30	29	21	41	0.30	-	0.20	0	2	18	11	S. C. Orr.	
Caldwell.	Canyon.	2,372	8	55.4	-	85	30	26	25	50	0.50	-	0.28	0	3	17	10	Wm. J. Boone.	
Caldwell Station.	do.	55.6	-	-	-	-	-	-	-	-	-	-	0.36	0	2	-	-	C. B. Hampson.	
Camas.	Fremont.	4,815	4	-	-	-	-	-	-	-	-	-	-	-	-	-	Mrs. Ednah Faulkner.		
Cambridge.	Washington.	2,651	16	54.0	-5.8	83	18	24a	24	52	1.39	+0.76	0.89	0	5	16	7	Chas. H. Shepherd.	
Cedar Creek Dam.	Twin Falls.	5,220	2	-	-	-	-	-	-	-	-	-	0.67	0	4	16	7	Robert Hoffman.	
Chesterfield.	Bannock.	5,424	16	48.2	-3.1	89	5	12	21	60	0.52	-	0.14	0.20	0	4	15	5	Chas. S. West.
Clark Fork.	Bonner.	2,084	-	51.2	-	72	12	31	15†	35	1.99	-	0.83	0	7	15	5	Wm. Potter.	
Clyde.	Custer.	6,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	R. L. Sutcliffe.		
Council.	Adams.	3,059	-	-	-	-	-	-	-	-	-	-	-	-	-	-	F. L. Featherston.		
Culdesac.	do.	56.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Mrs. B. B. Caldwell.		
Do. Nez Perce.	do.	5,200	4	55.0	-	81	11†	24	21	45	1.48	-	1.10	0	2	21	3	W. J. Davis.	
Do. Latah.	do.	2,854	-	51.5	-	79	10	27	21	48	1.71	-	0.95	0	5	18	5	John Krall, Jr.	
Deary.	Clearwater.	1,350	6	56.0	-	94	11	30	29	50	1.43	-	0.57	0	7	15	7	F. W. Beier.	
Dent.	Fremont.	6,097	5	43.1	-	71	3	15	21	41	0.97	-	0.95	T.	2	7	2	N. G. Massey.	
Driggs.	Canyon.	2,350	5	57.8	-	88	13	32	24	44	0.74	-	0.35	0	4	17	7	Jos. M. Clarke.	
Emmett.	Boise.	3,600	12	-	-	-	-	-	-	-	-	-	-	-	-	-	Fred Perry.		
Fornay.	Owyhee.	3,600	4	-	-	-	-	-	-	-	-	-	-	-	-	-	U. S. Forest Service.		
Garden Valley.	Boise.	2,575	13	60.4	-5.2	90	19	33	24	51	0.55	-0.21	0.55	0	1	19	4	I. E. Perkins.	
Garnet.	Elmore.	2,589	4	58.6	-	89	30	23	26	54	0.10	-	0.10	0	1	27	1	Mrs. Josie B. West.	
Glenns Ferry.	do.	3,572	3	53.9	-	84	30	22	25	49	0.18	-	0.13	0	2	16	11	U. S. Forest Service.	
Gooding.	Shoshone.	3,000	3	48.3	-	79	11†	22	21	48	2.11	-	0.60	0	11	12	3	E. D. Faust.	
Grand Forks.	Owyhee.	3,000	3	56.7d	-	86d	18	21d	25	60d	0.50	-	0.35	0	4	-	-	Mrs. Emma L. Brown.	
Grandview.	Boise.	5,200	3	-	-	-	-	-	-	-	-	-	-	-	-	-	Jos. Balluff.		
Grimes Pass.	Owyhee.	2,381	4	61.4	-	90	18†	32	25	50	0.37	-	0.27	0	3	28	2	U. S. Weather Bureau.	
Guffey.	Blaine.	5,347	10	50.9	-4.7	75	18†	25	21	39	0.69	-0.33	0.33	0	5	18	7	J. W. Bouten.	
Hailey.	Twin Falls.	4,550	-	54.2	-	84	30	25	15	46									

TABLE 1.—Climatological data for September, 1912. District No. 12—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years	Temperature, in degrees Fahrenheit.								Precipitation, in inches.								Sky.	Prevailing wind direction.	Observers.			
				Mean.				Departure from the normal.				Greatest daily range.				Total.				Departure from the normal.				Number of rainy days, 0.01 inch or more.	
				Highest.	Date.	Lowest.	Date.	Highest.	Date.	Lowest.	Date.	Greatest.	Date.	Lowest.	Date.	Greatest.	In 24 hours.	Total.	Greatest.	In 24 hours.	Total.	Greatest.	In 24 hours.		
<i>Idaho—Continued.</i>																									
Milner.....	Twin Falls.....	4,110	8	54.8	79	14	29	25	41	0.41	0.18	0	4	11	13	6	w.	J. K. Young.							
Moscow.....	Moscow.....	2,748	20	53.7	-3.5	77	14	32	24	37	1.76	+0.51	0.88	0	4	15	8	se.	University of Idaho.						
Mountainhome.....	Mountainhome.....	3,150	7	55.4	89	18	25	25	55	0.88	0.53	0	3	20	8	2	w.	Mrs. Ellen Manion.							
Murtaugh.....	Twin Falls.....	6	51.1d	81	39	23	21	48	0.20	0.20	0	1	1	14	16	0	w.	J. E. Steinour.							
New Meadows.....	Adams.....	3,950	8	55.8	85	5	27	20	45	1.52	-0.20	0.68	0	4	19	2	9	s.	E. G. Dunn.						
Nezperce.....	Lewis.....	3,082	3	52.0	85	5	27	20	45	1.52	-0.20	0.55	0	1	14	16	0	s.	P. Mitchell.						
Oakley.....	Cassia.....	4,700	19	53.6	-5.6	83	39	28	15	52	0.55	0.15	0.15	0	9	18	7	5	s.	John Adams.					
O'Hara Bar.....	Idaho.....	1,557	2	55.8	83	11	32	21	48	1.18	-0.29	0.54	0	9	20	3	7	s.	J. D. Agnew.						
Orofino.....	Clearwater.....	1,027	8	55.8	88	10	26	25	51	0.27	-0.29	0.15	0.15	0	9	18	7	5	s.	Geo. Alteneder.					
Payette.....	Canyon.....	2,159	5	55.9	-5.6	88	10	26	25	51	-0.29	-0.29	0.15	0	9	18	7	5	s.	E. F. Allen.					
Pebble.....	Bannock.....	5,277	3	55.8	88	10	26	25	51	-0.29	-0.29	0.15	0.15	0	9	18	7	5	s.	Alexander McQueen.					
Pierson.....	Custer.....	7,000	2	40.3	71	14	10	8	58	0.49	-0.23	0.23	0	3	22	0	8	s.	D. P. Clarke.						
Pleasant Valley.....	Ada.....	3,000	5	55.4	87	30	29	23	47	0.55	-0.32	0.32	0	4	26	2	2	s.e.	C. E. Friedrich.						
Pocatello.....	Pocatello.....	4,483	13	52.4	-8.3	79	30	26	21	40	0.92	+0.04	0.40	0	7	12	11	7	s.e.	U. S. Weather Bureau.					
Pocatello Nursery.....	do.....	5,396	5	49.2	78	2	21	20	44	1.60	-0.48	0.48	0	9	11	13	6	sw.	Mrs. Fanette E. Say.						
Poplar.....	Bonneville.....	5,500	2	8.6	74	6	17	21	41	0.42	-0.17	0.17	0	5	16	11	3	sw.	C. M. Lawrence.						
Porthill.....	Bonner.....	1,665	23	50.6	-3.1	76	12	27	29	40	0.44	-1.56	0.20	0	6	17	1	12	s.	H. A. French.					
Priest River Ex. Station.....	do.....	2,500	—	45.2	68	30	26	17	37	1.68	-0.55	0.55	0	9	16	8	6	s.	D. R. Brewster.						
No. 1.....																									
Priest River Ex. Station.....	do.....	2,500	—	51.2	80	11	26	29	45	1.47	-0.48	0.48	0	9	16	8	6	e.	Do.						
Priest River Ex. Station.....	do.....	—	—	48.5	77	11	19	29	51	1.51	-0.51	0.51	0	9	16	8	6	e.	Do.						
Pyle Creek.....	Boise.....	3,100	3	52.8	81	30	20	25	47	0.73	-0.30	0	5	23	3	4	s.	P. V. Smith.							
Richfield.....	Lincoln.....	4,306	3	52.8	81	30	20	25	47	0.28	-0.10	0	5	20	9	1	se.	Idaho Irrigation Co.							
Roseberry.....	Boise.....	4,872	1	45.0	77	30	17	21	54	1.41	-0.60	0	6	19	6	5	e.	J. L. Bumgarner.							
Roseworth.....	Twin Falls.....	4,650	—	55.8	81	30	25	25	45	0.77	-0.19	0	2	10	13	7	nw.	D. B. Hartwell.							
Rupert.....	Lincoln.....	4,204	6	52.6	81	30	25	25	45	0.77	-0.41	0	5	19	3	8	sw.	Will Parry.							
St. Anthony.....	Fremont.....	4,968	—	43.8	68	25	15	20	39	1.77	-0.62	0	4	19	11	0	s.	Heber C. Sharp.							
St. Maries.....	Kootenai.....	2,263	5	52.4	-4.4	76	30	30	21	40	0.55	-0.30	0	3	20	6	5	nw.	J. S. Turnbull.						
Salmon.....	Lemhi.....	4,040	7	48.2	74	2	21	24	48	1.04	-0.75	0	5	17	11	2	nw.	B. C. d'Easum.							
Sandpoint.....	Bonner.....	2,086	2	50.2	76	11	25	26	46	1.32	-0.52	0	7	18	5	7	n.	J. H. Edgerton.							
Sheep Hill.....	Boise.....	5,000	3	55.8	81	30	25	25	45	0.72	-0.32	0	5	15	6	9	n.	C. M. Gardner.							
Shoshone.....	Lincoln.....	3,998	4	55.8	81	30	25	25	45	0.72	-0.32	0	5	17	8	5	sw.	Zell Truman.							
Silver City.....	Owyhee.....	6,280	5	55.8	81	30	25	25	45	0.72	-0.32	0	5	17	8	5	sw.	Russel Stoddard.							
Smith Prairie.....	Elmore.....	5,200	3	55.8	81	30	25	25	45	0.72	-0.32	0	5	17	8	5	sw.	Wm. W. Newell.							
Soldier Creek.....	Blaine.....	5,755	2	55.8	81	30	25	25	45	0.72	-0.31	0	6	17	7	6	nw.	J. E. Minear.							
Spirit Lake.....	Kootenai.....	2,560	2	55.8	81	30	25	25	45	0.72	-0.31	0	6	17	7	6	s.	M. C. Krause.							
Springfield.....	Bingham.....	4,420	4	52.6	82	30	20	21	50	0.54	-0.24	0	3	14	12	4	sw.	Mrs. W. A. Edwards.							
Sugar.....	Fremont.....	4,892	5	47.4	82	30	19	21	45	1.01	-0.42	0	4	8	9	13	sw.	Utah-Idaho Sugar Co.							
Sunnyside.....	Elmore.....	3,500	3	58.8	86	30	31	23	50	0.47	-0.30	0	3	20	5	5	nw.	Col. M. W. Wood.							
Tripod Mountain.....	Boise.....	4,300	3	55.8	86	30	26	21	53	0.30	-0.15	0	4	12	18	0	sw.	Mrs. Verna Paddock.							
Twin Falls.....	Twin Falls.....	3,825	7	54.2	86	30	26	21	53	0.30	-0.15	0	4	12	18	0	sw.	J. A. Waters.							
Vernon.....	Fremont.....	5,050	14	48.2	-5.9	81	16	20	21	55	1.43	+0.50	0.52	0	6	10	15	5	sw.	A. M. Slattery.					
Wallace.....	Shoshone.....	2,728	5	50.6	75	30	30	21	40	2.46	-0.56	0.56	0	10	15	6	5	e.	U. S. Weather Bureau.						
Weiser.....	Washington.....	2,114	—	57.6	88	13	26	25	54	0.37	-0.31	0	2	14	10	6	se.	J. W. Lapish.							
Wendell.....	Lincoln.....	3,400	4	55.6	87	30	27	24	46	0.31	-0.18	0	2	24	5	1	w.	Chas. L. Dingler.							
<i>Washington.</i>																									
Aberdeen.....	Chehalis.....	162	21	55.0	+ 0.4	85	11	37	24	41	4.16	-0.45	1.92	0	7	17	11	2	w.	Carl S. Weatherwax.					
Anacortes.....	Skagit.....	60	18	50.5	—	80	30	27	25	45	0.84	-0.56	0	4	16	10	4	sw.							
Anatone.....	Asoin.....	—	—	50.5	—	83	13	39	27	41	1.36	-0.55	0	6	16	5	9	s.	W. A. Hamilton.						
Baker.....	Skagit.....	200	6	58.6	83	13	39	27	41	1.36	-0.55	0	6	16	5	9	s.	Robt. M. White.							
Bellingham.....	Whatcom.....	60	17	57.8	+ 1.6	83	15	37	23	40	0.96	-1.69	0.63	0	4	24	0	6	s.	Sanford B. Mayhew.					
Bellingham (near).....	do.....	107	—	54.0	80	14	32	35	46	1.15	-0.80	0.80	0	3	20	5	5	nw.	U. S. Bureau Plant Industry.						
Blaine.....	do.....	57	15	55.2	+ 1.3	74	28	35	31	46	0.96	-2.57	0.59	0	6	10	13	7	sw.	J. M. Scott.					
Blewett.....	Chelan.....	2,200	2	55.8	87	13	23	24	48	0.58	-0.38	0.20	0	5	20	5	5	sw.	U. S. Navy Yard.						
Bremerton.....	Kitsap.....	30	—	58.4	84	12	38	24	33	0.42	-0.18	0	4	19	7	4	sw.	U. S. Navy Yard.							
Bumping Lake.....	Okanogan.....	3,400	5	55.8	84	12	38	24	33	0.42	-0.18	0	4	19	7	4	sw.	Mrs. H. T. Bertram.							
Cedar River.....	Yakima.....	535	—	52.8	81	15	22	29	51	1.56	-0.54	0	6	16	1	13	n.	Geo. Landsburg.							
Centralia.....	Lewis.....	212	19	57.2	+ 1.2	82	12	30	24	42	0.57	-0.42	0.29	0	2	18	5	7	n.	I. S. Turner.					
Cheney.....	Spokane.....	2,351	13	52.8	-2.7	87	13																		

TABLE 1.—Climatological data for September, 1912. District No. 12—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.				
				Mean.			Departure from the normal.			Highest.			Lowest.									
				Date.	Lowest.	Greatest in 24 hours.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.								
Washington—Contd.																						
Kettle Falls.	Stevens.	1,265	3	56.4	84	11†	30	24†	41	1.07	0.83	0	4	16	10	4	.....	Harry H. Cole.			
Kiona.	Benton.	430	7	57.6	85	21	33	25	45	1.65	0.52	0	6	15	13	2	ne.	J. A. Ulsh.				
Kosmos.	Lewis.	775	6	57.6	89 ^e	14	32	26	50	2.48	-0.23	0.93	0	7	19	7	4	sw.	Joseph Brothers.			
La Center.	Clark.	250	15	56.0	-2.8	82	12†	27	24	47	0.68	0.31	0	4	21	5	4	e.	M. E. Schreck.			
La Crosse.	Whitman.	1,400	3	56.1	82	12†	27	24	47	0.68	0.53	0	4	13	8	9	nw.	U. S. Reclamation Service.				
Lake Clealum.	Kittitas.	2,171	3	.....	.....	.....	.....	.....	.....	1.13	.....	.....	.....	.....	.....	.....	.....	Do.
Lake Kachess.	do.	2,335	4	53.2	84	13	29	24	42	0.51	0.22	0	5	15	10	5	w.	Do.				
Lake Keechelus.	do.	2,479	4	.....	.....	.....	.....	.....	.....	1.04	0.25	0	6	16	5	9	w.	W. H. Van Meter.
Lakeside.	Chelan.	1,116	21	60.6	-1.3	SS	12	40	24	36	0.24	-0.26	0.16	0	3	13	14	3	w.	Mrs. Minnie E. Strout.		
Laurel.	Klickitat.	1,900	3	0.71	0.23	0.68	0	5	16	11	3	w.	Mrs. J. S. Myers.			
Laurier.	Ferry.	1,644	2	53.6	82	13	27	29†	45	0.97	0.15	0.19	0	4	12	5	13	w.	U. S. Engineer Corps.			
Lone Tree.	Chehalis.	14	3	59.2	75	14†	44	10	30	2.98	1.12	0	10	14	11	5	nw.	National Park ranger.				
Longmires Springs.	Pierce.	2,800	3	1.60	1.10	0	2			
Lost Creek.	Okanogan.	3,125	3	.....	.....	.....	.....	.....	.....	0.03	0.03	0	1	14	14	2	.....	P. H. Leese.
McConihe.	Grant.	1,072	.....	59.4	89	12	37	24†	43	0.01	0.01	0	1	17	7	6	n.	Lucien F. McConihe.			
McCubbers Ranch.	Yakima.	2,182	3	.....	.....	.....	.....	.....	.....	0.40	0.20	0	4	14	16	0	sw.	Mrs. Mary McCumber.
Moses Lake.	Grant.	.....	.....	.....	.....	.....	.....	.....	.....	0.19	0.15	0	2	29	4	4	e.	H. M. Flemming.
Mottinger.	Benton.	307	12	63.5	-3.0	89	13	43	25†	37	T.	-0.56	T.	0	0	22	4	4	G. H. Mottinger.		
Mount Pleasant.	Clallam.	500			
Moxee.	Yakima.	1,000	20	58.7	-1.2	92	12†	31	21	51	0.13	-0.29	0.07	0	2	20	6	4	nw.	H. B. Scudder.		
Newport.	Stevens.	2,400	20	50.2	80	11	23	29	44	1.00	0.40	0	6	15	8	7	e.	Chas. M. Talmadge.				
North Head.	Pacific.	211	10	58.4	+ 2.2	81	10	48	3	23	2.10	+ 0.25	0.95	0	10	11	8	nw.	U. S. Weather Bureau.			
Northport.	Stevens.	1,350	13	55.0	82	13	30	28	43	1.63	+ 0.05	0.58	0	5	18	10	2	W. F. Case.			
North Yakima.	Yakima.	1,070	3	59.4	86	12†	36	25	39	0.17	0.10	0	2	21	6	3	nw.	Albert Bender.				
Nutland.	Klickitat.	3	64.0	90	1	33	26	41	0.00	0.00	0.00	0	0	.....	.....	.....	.....	Ruth J. Shepard.
Odessa.	Lincoln.	1,540	9	56.6	85	12	23	24	32	0.23	0.20	0	2	15	14	1	sw.	H. W. Rieke.				
Oiga.	San Juan.	50	22	55.8	+ 0.3	74	14	49	3	22	1.14	-1.69	0.74	0	5	16	7	7	nw.	Cecil S. Willis.		
Olympia.	Thurston.	200	34	57.8	+ 0.9	83	15	35	24	45	2.08	-0.71	0.96	0	7	18	4	8	ne.	M. O. Connor.		
Omak.	Okanogan.	850	3	58.0	89	12	27	24	47	0.19	0.19	0	1	23	1	6	n.	Saint John Umbrite.				
Oroville.	do.	922	3	59.0	85	11	31	24	44	0.63	0.30	0	3	19	2	9	n.	M. C. Jackman.				
Peola.	Garfield.	5,000	3	.....	.....	.....	.....	.....	.....	0.75	0.35	0	5	22	7	1	nw.	Samuel Gruell, sr.
Pomeroy.	do.	1,500	20	57.5	-4.3	81	11†	33	20	42	-0.46	-0.59	0.40	0	3	15	8	7	w.	Peter McClung.		
Port Crescent.	Clallam.	259	17	52.4	-0.1	78	13	34	24	32	1.49	-0.81	0.75	0	7	9	13	s.	U. S. Weather Bureau.			
Port Townsend.	Jefferson.	80	22	57.4	+ 0.4	80	14	42	24	29	0.56	-0.64	0.29	0	6	18	2	10	nw.	F. Plummer.		
Prosser.	Benton.	650	.....	59.6	89	12†	35	21	45	0.75	0.45	0	0	25	5	0	.....	E. L. Capps.		
Pullman.	Whitman.	2,550	20	55.2	-3.5	78	13	36	25	33	1.00	-0.34	0.56	0	5	23	4	3	sw.	State Agricultural College.		
Quets River.	Chehalis.	16	.....	57.8	83	15	40	24	36	1.17	0.35	0	8	20	3	2	nw.	C. A. Bullard.			
Quinault.	do.	300	5	60.0	90	10†	36	24	47	6.48	2.00	0	9	16	7	7	w.	A. V. Higley.				
Republic.	Ferry.	2,628	12	51.4	-2.7	83	12	24	24	48	0.86	0.39	0	4	16	8	6	nw.	Geo. B. Stocking.			
Rex Creek.	Chehalis.	1,135	4	58.0 ^b	80 ^b	12	40 ^b	24	32	0.60	0.46	0	2	10 ^b	8 ^b	10 ^b	se.	J. W. Nicol.				
Ritzville.	Adams.	1,825	13	52.0	84	12	24	24	46	0.49	0.20	0	6	16	14	0	.....	R. R. Couger.			
Robertsville.	Klickitat.			
Rock Lake.	Whitman.	1,910	6	84	12	24	24	46	46	0.49	0.99	-0.17	0.60	0	5	16	7	7	sw.	Hans Mumm.		
Rosalia.	do.	2,425	20	54.4	-1.8	79	26	31	24	44	0.99	-0.17	0.60	0	5	18	7	5	w.	Mrs. Adella Russell.		
Russells Ranch.	Yakima.	2,870	3	.....	.....	.....	.....	.....	.....	1.34	0.46	0	8	12	6	2	n.	U. S. Weather Bureau.
Seattle.	King.	123	20	59.2	+ 1.3	89	15	42	24	25	1.73	-1.20	0.25	0	5	12	8	4	s.	Mrs. H. L. Devin.		
Sedro Woolley.	Skagit.	38	15	56.6	-0.9	78	14†	35	27	38	1.30	-1.89	0.85	0	8	19	6	5	ne.	C. E. Comstock.		
Sixprong.	Klickitat.	1,240	5	60.7	88	13	40	24†	36	0.14	0.11	0	2	22	2	6	.....	.....		
Skagit Power Dam.	Whatcom.	510	2	.....	.....	.....	.....	.....	.....	0.11	0.11	0	0	25	5	0	.....	.....		
Snohomish.	Snohomish.	100	18	58.2	+ 1.0	86	15	34	10	45	1.30	-1.88	0.30	0	5	21	5	4	w.	James Bylling.		
Snoqualmie Falls.	King.	667	12	57.4	81	11	35	24	40	1.32	-1.53	0.35	0	7	17	4	9	O. N. Wiswell.			
Snoqualmie Pass.	do.	3,000	5	60.0	90	10†	36	24	47	6.48	2.00	0	9	16	7	7	w.	.....			
Snyders Ranch.	Okanogan.	2,200	3	51.4	87	12	22	24†	55	0.24	0.24	0.24	0	1	18	9	3	ne.	G. M. Snyder.			
South Bend.	Pacific.	17	58.8	-0.5	85	13	37	24	36	2.84	-0.45	0.82	0	11	14	3	13	w.	Mrs. Winifred E. Buckingham.			
Spokane.	Spokane.	1,943	31	56.0	-2.8	89	12	35	21	38	0.84	-0.17	0.46	0	6	14	6	10	n.	U. S. Weather Bureau.		
State University.	King.	170	3	58.8	78	15	46	31	48	0.54	0.25	0.25	0	3	19	8	3	s.	University of Washington.			
Stokes Ranch.	Okanogan.	2,670	3	0.54	0.25	0.25	0	3	19	8	3	sw.	Chas. W. Gunn.			
Summer.	Pierce.	77	4	56.4	84	15	31	25	49	1.67	-0.54	0.54	0	8	16	5	9	n.	H. E. Thompson.			
Sunnyside.	Yakima.	740	17	58.4	-2.3	82	12	34	21†	48	1.10	-0.36	0.69	0	2	17	11	2	ne.	U. S. Reclamation Service.		
Tacoma.	Pierce.	213	26	58.1	+ 0.5	78	15	42	24	30	1.38	-1.09	0.42	0	6	11	11	8	n.	U. S. Weather Bureau.		
Tatoosh Island.	Clallam.	55	27	56.1	+ 2.2	76	14	46	24	42	3.44	-2.80	1.16	0	0	7	12	10	w.	Do.		
Tieton.	Yakima.	2,000	3	53.0	85	12	30	24	42	0.64	0.45	0.45	0	6	18	7	5	w.	U. S. Reclamation Service.			
Toucheet.	Walla Walla.	556	5	59.4	87	12	31	20†	53	0.10	0.08	0	2	24	4	2	sw.	D. W. Dorrance.				
Toucheet Ridge.	Columbia.	2,500	3	.....	.....	.....	.....	.....	.....	1.78	0.93	0	2	16	12	2	sw.	R. H. King.
Trinidad.	Douglas.	900	8	63.0	90	12	43	5	34	0.16	0.16	0	1	26	0	4	ne.	J. C. Wheeler.				
Vancouver.	Clarke.	100	37	61.1	+ 0.1	84	13	38	26	40	1.40	-0.31	0.51	0	8	17	4	9	nw.	A. A. Quarneberg.		
Vashon Island.	King.	40	23	56.8	-0.4	76	15	43	37	23	1.06	-1.13	0.26	0	10							

TABLE 1.—Climatological data for September, 1912. District No. 12—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years	Temperature, in degrees Fahrenheit.							Precipitation, in inches.							Sky.	Prevailing wind direction.	Observers.				
				Mean.			Departure from the normal.		Highest.		Lowest.		Greatest daily range.		Total.		Departure from the normal.		Greatest in 24 hours.		Total snowfall, unmetted.			
				Date.	Lowest.	Date.	Highest.	Date.	Date.	Greatest daily range.	Total.	Date.	Greatest in 24 hours.	Total.	Date.	Greatest in 24 hours.	Total.	Date.	Greatest in 24 hours.	Total.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.
Oregon—Continued.																								
Cazadero.....	Clackamas.....	503	3	61.8	.....	87	13	35	26	44	2.11	.....	.....	.....	0.58	0	9	17	1	12	se.	Alf. Drill.
Cliff.....	Lake.....	4,300	5	48.0	.....	82	18	14	24	59	0.58	.....	.....	.....	0.24	0	5	16	10	4	nw.	John C. Green.
Condon.....	Gilliam.....	2,884	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. H. Williams.	
Corvallis.....	Benton.....	266	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Oregon Agricultural College.	
Crescent.....	Klamath.....	4,400	47.3	.....	.....	83	13	13	25	63	0.60	.....	.....	.....	0.34	0	7	19	4	7	sw.	U. S. Forest Service.
Dayville.....	Grant.....	2,200	18	53.4	- 5.9	80	12 ^d	26	25	50	0.20	- 0.56	.....	.....	0.09	0	4	19	9	6	nw.	Dr. J. Campbell-Martin.
Deadwood.....	Lane.....	350	2	60.5	- 0.5	84	14	41	5	39	5.88	.....	.....	.....	2.13	0	7	15	9	6	s.	Jos. Slemmons.
Doraville.....	Columbia.....	600	10	57.8	.....	80	11	38	24	32	1.56	- 0.50	.....	.....	0.63	0	11	17	3	10	ne.	Jos. Hackenberg.
Drain.....	Douglas.....	300	10	60.2	.....	88	11	37	26	49	2.42	.....	.....	.....	0.66	0	9	12	8	10	nw.	Ira Wimberly.
Echo.....	Umatilla.....	625	8	58.6 ^a	.....	87 ^d	18	34 ^d	20	52 ^d	0.05	.....	.....	.....	0.05	0	1	20 ^d	6 ^d	6 ^d	w.	R. B. Stanfield.
Ella.....	Morrow.....	• 830	8	59.9	.....	85	11 ^d	36	17	40	0.10	- 0.35	.....	.....	0.10	0	1	28	2	0	ne.	Carl F. Troedson.
Eugene.....	Lane.....	449	22	60.8	+ 0.8	81	13	42	23	29	1.97	+ 0.35	.....	.....	0.57	0	6	18	5	7	nw.	University of Oregon.
Fairview.....	Coos.....	142	16	59.0	+ 0.6	89	9	34	30	34	5.71	+ 3.61	.....	.....	1.50	0	6	23	0	7	nw.	Wm. Betllys.
Forest Grove.....	Washington.....	220	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Pacific University.	
Gardiner.....	Douglas.....	72	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Hon. J. S. Gray.	
Glendale.....	do.....	1,441	8	60.0	.....	93	13	35	8	52	0.52	.....	.....	.....	0.19	0	6	17	13	0	nw.	B. J. Simpson.
Glenora.....	Tillamook.....	575	21	57.0	- 0.1	84	13	32	25	44	5.03	- 0.07	.....	.....	2.42	0	6	19	0	11	nw.	Mrs. Jennie A. Reeher.
Gold Beach.....	Curry.....	40	11	58.8	.....	80	18 ^d	40	47	20	3.04	.....	.....	.....	0.70	0	7	20	10	0	n.	John W. Riley.
Grants Pass.....	Josephine.....	956	24	59.3	- 1.7	93	14 ^d	34	25	52	1.45	- 0.56	.....	.....	0.63	0	7	17	4	9	sw.	John B. Paddock.
Grass Valley.....	Sherman.....	2,381	11	52.8	.....	86	12	25	20	48	0.33	.....	.....	.....	0.25	0	2	21	0	9	nw.	Agent O.-W. R. & N. Co.
Gurdane.....	Umatilla.....	3,500	3	57.8	.....	89	26	37	37	36	0.04	.....	.....	.....	0.02	0	3	18	4	8	w.	Miss Belle Ely.
Headworks.....	Clackamas.....	719	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Portland Water Works.	
Heppner.....	Morrow.....	1,950	22	55.8	- 4.2	80	12 ^d	34	20	36	0.37	- 0.68	.....	.....	0.31	0	3	17	9	4	w.	Frank Gilliam.
Herniston.....	Umatilla.....	451	5	60.8	.....	89	16	31	21	56	0.03	.....	.....	.....	0.03	0	1	20	6	4	sw.	C. W. Kellogg.
Hermoso Rio.....	Crook.....	2,110	22	53.8 ^c	.....	84 ^c	15 ^d	30 ^c	24 ^c	48 ^c	0.55	.....	.....	.....	0.30	0	3	18	5	7	w.	Carl T. Hubbard.
Hood River.....	Hood River.....	300	22	58.9	- 0.7	89	13	36	25	44	0.09	- 1.40	.....	.....	0.09	0	1	20	4	6	w.	H. L. Hasbrouck.
Hood River, No. 2.....	do.....	485	1	59.8	.....	88	13	39	27	40	0.55	.....	.....	.....	0.22	0	4	23	3	4	w.	W. H. Lawrence.
Hood River, No. 3.....	do.....	620	1	58.0	.....	90	13	31	24	48	0.59	.....	.....	.....	0.28	0	6	19	10	1	e.	U. A. Newman.
Hood River, No. 4.....	do.....	850	1	58.0	.....	87	13	34	24 ^d	40	0.60	.....	.....	.....	0.30	0	5	22	5	3	w.	P. L. Smith
Huntington.....	Baker.....	2,165	11	.....	.....	85	13	35	24	44	0.06	- 0.36	.....	.....	0.06	0	1	20	10	0	w.	Agent O.-W. R. & N. Co.
Jacksonville.....	Jackson.....	1,640	24	61.6	- 0.6	89	13 ^d	39	24	44	1.29	+ 0.38	.....	.....	0.61	0	7	19	2	9	sw.	E. Britt.
Joseph.....	Wallowa.....	4,400	23	51.0	- 2.4	79	29	26	22	44	1.00	- 0.16	.....	.....	0.82	0	6	15	3	12	s.	F. McCully.
Klamath Agency.....	Klamath.....	4,169	4	51.4	.....	90	12	26	29	56	1.30	.....	.....	.....	0.50	0	3	21	3	6	w.	N. D. Ginsbach.
Klamath Falls.....	do.....	4,100	24	54.8	- 3.4	83	18	31	24	39	1.04	+ 0.51	.....	.....	0.71	0	5	17	8	5	nw.	Augusta J. Hayden.
La Grande.....	Union.....	2,784	24	54.2	- 5.2	81	18	26	25	46	1.01	- 0.09	.....	.....	0.63	0	5	19	4	7	nw.	W. A. Worstell.
Lakeview.....	Lake.....	4,825	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Ralph C. Koozer.	
McKenzie Bridge.....	Lane.....	1,400	11	56.0	- 2.0	91	13	28	25	54	2.98	+ 0.60	.....	.....	0.67	0	10	17	2	11	w.	Geo. Frissell.
McMinnville.....	Yamhill.....	182	25	86	11	37	26	43	4.12	1.63	- 0.31	0	7	15	5	10	sw.	M. E. Pettit.	
Marshfield.....	Coos.....	34	11	58.2	.....	84	10	37	26	43	4.12	.....	.....	.....	1.26	0	8	18	3	9	n.	U. S. Weather Bureau.
Meadow Brook Ranch.....	Hood River.....	850	1	58.5	.....	84	13	36	24	38	1.23	.....	.....	.....	0.74	0	5	24	5	1	w.	John W. Palmer.
Medford.....	Jackson.....	1,425	2	61.6	.....	90	13 ^d	36	24 ^d	48	1.11	.....	.....	.....	0.24	0	3	20	4	6	w.	U. S. Weather Bureau.
Merrill.....	Klamath.....	4,070	7	53.0	.....	85	18	26	25	54	0.65	.....	.....	.....	0.38	0	3	19	3	8	sw.	U. S. Reclamation Service.
Metolius.....	Crook.....	2,525	2	52.6	.....	82	18	28	23	42	0.34	.....	.....	.....	0.24	0	4	16	5	9	sw.	W. E. Bottman.
Mikkalo.....	Gilliam.....	1,400	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Frank Little.	
Miramonte Farm.....	Clackamas.....	195	24	59.6	+ 0.2	83	15	36	24	36	1.41	- 0.75	.....	.....	0.59	0	6	17	4	9	n.	G. Muecke.
Monroe.....	Benton.....	350	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L. A. Peek.	
Mount Angel.....	Marion.....	485	26	61.7	+ 0.4	82	15	43	24	29	2.20	+ 0.19	.....	.....	0.95	0	8	17	6	7	e.	Dr. Urban Fischer.
Mt. Hood.....	Hood River.....	1,450	1	54.1	.....	84	13	29	24	44	0.56	.....	.....	.....	0.24	0	6	19	8	3	nw.	Isaac Beal.
Musick.....	Douglas.....	5,000	3	52.0	.....	78	26	30	24	35	4.40	.....	.....	.....	1.30	0	8	21	1	12	sw.	Alex. Lundberg.
Newport.....	Lincoln.....	69	25	59.4	+ 3.4	88	10	43	21 ^d	37	4.35	+ 2.64	.....	.....	1.33	0	7	12	6	12	nw.	Wm. Mathews.
Odell.....	Hood River.....	1,000	1	59.4	.....	88	13	38	24	34	0.54	.....	.....	.....	0.20	0	5	21	0	9	sw.	T. A. Decker.
Ortley.....	Wasco.....	1,600	1	57.7	.....	84	13	39	24	33	0.45	.....	.....	.....	0.25	0	12	18	10	2	sw.	L. D. Firebaugh.
Paisley.....	Lake.....	4,500	9	58.1	.....	85	13	33	24	39	0.51	.....	.....	.....	0.35	0	5	21	5	4	n.	E. C. Woodward.
Parkdale.....	Hood River.....	1,650	2	58.1	.....	85	13	33	24	39	0.51	.....	.....	.....	0.35	0	4	21	4	5	w.	S. G. Babson.
Pendleton.....	Umatilla.....	1,070	23	58.8	- 2.4	93	15	31	20	54	0.22	- 0.67	.....	.....	0.13	0	4	21	4	5	w.	E. F. Averill.
Pilot Rock.....	do.....	1,817	4	59.3	.....	87	18	37	20	48	0.38	.....	.....	.....	0.12	0	5	21	0	9	sw.	John P. McManus.
Pompeii.....																								

TABLE 2.—*Daily precipitation for September, 1912. District No. 12, Columbia Valley.*

Stations.	Watershed.	Day of month.																													Total.			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			
<i>Montana.</i>																																		
Anaconda.....	Missoula.....	.16	*	1.40	.02	T.	T.																										2.26	
Butte.....	do.....	T.	.10	.65	T.																												0.95	
Columbia Falls.....	Flathead.....	.09	.15	.07	.09		.55	.09																								1.50		
Como.....	Bitter Root.....	.05		.77	.26																											1.23		
Dayton.....	Flathead.....	T.	.30		T.		T.																									0.80		
East Anaconda |||.....	Missoula.....	.28	1.10	.08		T.	T.																									2.03		
Fortine.....	Kootenai.....	.27	1.0	.49	.08	.14	T.	.03																							1.62			
Hamilton.....	Bitter Root.....		.10	.10	.56	.28																										1.10		
Hat Creek.....	Missoula.....		.16	.44	.83	.04		.06																							2.75			
Haugan.....	do.....	.15	.03	.10	.01	T.	T.	.20	.10																						1.20			
Heron.....	Columbia.....	.41	.08	.16	.01	.14		.32	.15																						1.93			
Kalispell.....	Flathead.....	.02	.02	.12	.06	.01		.15	.01																						0.68			
Libby.....	Kootenai.....	.68	1.0	.05	.02	T.	T.	.11	.07																						1.30			
Lost Creek.....	Missoula.....		.06	.20	1.11	.04																									2.22			
Missoula.....	do.....	.02	.14	.03	.33	.28		.08																							1.58			
Ophir.....	do.....	.52	.20	.23	1.03	.05																									4.50			
Ovando.....	T.		.05	.60	.15	.20	.09	.05																						1.52				
Philippsburg.....	do.....		.20		1.00	T.	.23																								1.73			
Plains.....	Columbia.....	.02	*	*	*	*	*	*	.52																							1.09		
Pleasant Valley.....	Kootenai.....	T.	.10	.08	.07			.12																							0.76			
Polson.....	Flathead.....		.13	.20			.60	.10																							1.57			
St. Ignatius.....	do.....	.04	.10	.12	.20	.15	.41	T.																							1.64			
Saitese.....	Missoula.....							.18	.44																						1.38			
Stevensville |||.....	Bitter Root.....	.06	.04	.43	.35			.04	T.																						1.13			
Thompson Falls.....	Columbia.....	.31	.03	.17	T.	.04		.20	.07	.02																				1.16				
<i>Wyoming.</i>																																		
Afton.....	Snake.....	.08		.06																													1.28	
Alta.....	do.....	.42		.07	.05																												1.48	
Bechler River.....	do.....		.02	.01																												0.21		
Bedford.....	do.....	.07		.15	.03																											1.14		
Moran.....	do.....	.37		.05	.02																											1.52		
Snake River.....	do.....	.47		.08	.09		T.																									1.32		
<i>Nevada.</i>																																		
San Jacinto.....	Snake.....																																	
<i>Utah.</i>																																		
Standrod.....	Boxelder.....	.02		.30																													0.66	
<i>Idaho.</i>																																		
Albion.....	Snake.....																																	
Almo.....	do.....	.04	T.	.05	.61																												1.10	
American Falls.....	Boise.....	.09		.08	.14																											0.82		
Arrowrock.....	Blackfoot 03	.07	.52																												0.87		
Blackfoot.....	Blackfoot.....	T.	.06																													0.27		
Blackfoot Dam.....	do.....	.05			.03																											1.06		
Bogus Creek.....	Payette.....		.16					.72	.18																						1.06			
Boise.....	T.	.20	.32			.25																										0.77		
Bonners Ferry.....	Kootenai.....																																	
Boulder Mine.....	Boise.....	.07		.20	.76	.04		.39																							1.57			
Buhl.....	Snake.....	.20		T.	.10			.39																							0.30			
Caldwell.....	Boise.....		.28					.21	.01																						0.50			
Caldwell Ex. Station.....	do.....							.36		.17																					0.53			
Camas.....	Lost River reg'n.....																																	
Cambridge.....	Weiser.....	.05		.18	.25	.02		.89	T.																						T.	1.39		
Cedar Creek Dam.....	Snake.....	.20	.01	.14		.32																									0.67			
Chesterfield.....	Port Neuf.....	.23	T.	.14	.02	.09		.37	.31		T.	.07	T.	.10	.20	.15														0.52				
Clarks Fork.....	Pend d'Oreille.....																														1.99			
Clyde.....	Lost River reg'n.....																																	
Council.....	Weiser.....																																	
Culdesac.....	Clearwater.....	.16	.16	.14					.64	.08																					1.48			
Dearly.....	do.....	.09	.23						.95	.24																					1.19			
Dent.....	do.....	.20	.10	T.	T.			.57	.																									

TABLE 2.—*Daily precipitation for September, 1912. District No. 12—Continued.*

TABLE 2.—*Daily precipitation for September, 1912. District No. 12—Continued.*

TABLE 2.—*Daily precipitation for September, 1912. District No. 12—Continued.*

Stations.	Watershed.	Day of month.																													Total					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29						
<i>Oregon—Continued.</i>																																				
Butte Falls.	Rogue.	.29	.01	.....	29	1.33	.20	.07	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.02	.10	2.31		
California (Gulch).	Umatilla.	.15	.....	.....	.....	.41	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.30	0.86		
Canyon City.	John Day.	1.07	.51	.24	.02	.04	.77	.03	.08	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.24	3.00		
Cascade Locks.	Columbia.	.17	1.15	.22	.....	.17	.28	.60	.55	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.15	3.29		
Cascadia.	Willamette.	.04	.58	.13	T.	.07	.12	.38	.45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.33	2.11		
Cazadero.	do.	.16	T.	.....	.....	.02	.17	.14	T.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.49	0.49	
Christmas Lake.	SE. drainage.	.04	.03	.....	.22	.24	.05	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.58	0.58	
Cliff.	do.	.04	.02	.05	.....	.....	.....	.48	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.68	0.68	
Columbius Mine.	Snake.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Condon.	John Day.	1.45	1.60	.....	.....	.80	.....	.27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.25	4.37	
Coquille River.	Coast.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lighthouse.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cornucopia.	Snake.	.....	.....	.....	.....	.05	.22	.02	.42	.08	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.82	
Corvallis.	Willamette.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cracker Creek.	Snake.	T.	T.	T.	T.	.....	.....	T.	.05	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.06
Crescent.	Deschutes.	.01	.11	.02	T.	.01	.34	T.	.10	.01	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.60	
Dayville.	John Day.	.....	.....	.....	.....	.01	.05	.09	T.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.20	
Deadwood.	Coast.	2.13	.55	.....	.75	1.13	.27	.....	.67	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.38	5.88	
Diamond.	SE. drainage.	.....	.....	.....	.....	.05	.....	T.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.33	
Doraville.	Columbia.	.03	.63	.01	.....	.08	.35	.27	.03	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.58	
Drain.	Umpqua.	.12	.66	.53	.....	.38	.06	.43	.10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.12	2.42
Dufur.	Columbia.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Duncan.	Umatilla.	.....	.....	.20	.30	.....	.40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.55
Echo.	Columbia.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.05
Ella.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.10
Embody.	SE. drainage.	.22	.....	.....	.....	.19	.31	.05	.10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.87
Eugene.	Villamette.	.50	.57	T.41	.03	.3509	1.97
Fairview.	Coast.	.50	1.30	1.12	1.50	.6960	5.71
Falls City.	Williamette.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fir Glen.	Coast.	.11	.69	.34	T.	.74	.35	.1603	2.52
Florence.	.....	1.90	30	.....	.54	.28	.26	.22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.21	3.71
Forest Grove.	Williamette.	.....	.....	.....	.....	.12	T.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.27
Fort Rock.	SE. drainage.	.....	.....	.....	.....	.05	T.	.....	.01	.05	T.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.59
Galice.	Rogue.	.....	.....	.55	.39	.....	1.14	.29	.10	.03	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.00
Gardiner.	Umpqua.	0.00
Gibbon.	Columbia.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.00
Glendale.	Umpqua.	.19	.11	.0207	.09	T.04	0.52
Glenora.	Coast.	.18	.400910	.24	.41	1.42	5.03
Gold Beach.	Rogue.	.60	.80	.04	.7020	.3040	3.04
Golden Falls.	Coast.	1.20	1.05	1.11	.06	.47	.3929	4.55
Granderonde.	do.	0.04
Grants Pass.	Rogue.	.18	.1763	.22	.19	.0105	1.45
Grass Valley.	John Day.	.0825	0.33
Greenhorn.	Snake.	.05	.06	.03	T.																															

TABLE 2.—*Daily precipitation for September, 1912. District No. 12—Continued.*

* Precipitation included in that of the next measurement.

[†] Separate dates of falls not recorded.
[¶] Precipitation for the 24 hours ending

|| Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—Maximum and minimum temperatures at selected stations for September, 1912. District No. 12, Columbia Valley.

Date.	Montana.				Afton, Wyo.	Idaho.														Vernon.		Wallace.				
	Kalispell.		Missoula.			Boise.		Bonners Ferry.		Hot Spring.		Lewiston.		Mackay.		New Meadows.		Pocatello.		Salmon.		Shoshone.		Vernon.		
	Max.	Min.	Max.	Min.		Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Mn.	Max.	Min.	
1	60	41	63	40	71	43	69	47	71	58	72	50	65	42	67	50	72	44	62	45	59	44				
2	51	33	59	38	86	42	79	56	82	59	70	52	67	56	68	55	74	40	72	41	63	40				
3	54	44	56	46	86	46	56	47	70	47	65	51	64	45	75	42	60	38	70	42	59	44				
4	49	42	52	42	65	35	50	44	55	45	64	47	50	37	53	41	63	34	58	40	56	37				
5	57	42	60	38	64	31	68	46	70	42	71	48	54	33	63	33	64	33	57	29	62	39				
6	65	39	69	38	80	26	78	60	79	55	66	53	67	32	76	41	68	34	73	31	69	42				
7	57	44	56	46	71	36	64	50	70	50	70	52	64	43	68	51	66	33	62	40	50	43				
8	59	44	62	41	56	39	64	41	70	40	72	51	58	36	62	44	70	36	62	34	60	45				
9	65	38	67	37	64	35	71	41	72	40	75	46	62	43	56	47	65	30	60	43	69	38				
10	72	39	72	35	66	40	74	45	74	45	79	47	62	41	63	46	70	33	64	34	74	37				
11	72	40	76	36	68	33	74	52	75	46	82	48	59	38	60	41	70	32	62	43	76	40				
12	73	42	76	38	64	36	75	51	78	52	83	49	69	35	69	41	68	27	61	38	74	42				
13	59	39	62	46	64	32	77	49	78	45	83	51	68	37	70	39	71	28	60	37	67	43				
14	57	32	58	38	50	25	65	44	77	48	72	46	54	32	54	34	70	26	51	28	60	32				
15	61	28	64	30	60	25	66	42	68	54	75	44	53	27	59	30	64	27	70	27	64	32				
16	63	31	70	28	63	23	71	40	73	35	81	42	67	28	67	34	62	25	81	28	70	32				
17	69	33	76	32	65	26	77	45	77	35	79	44	68	35	71	37	61	24	68	36	70	36				
18	69	38	76	36	71	25	82	46	82	40	81	47	76	40	76	39	64	25	70	30	68	39				
19	61	36	62	44	59	34	70	49	78	48	73	47	74	26	67	39	70	26	62	35	64	34				
20	62	32	63	30	53	33	66	42	70	40	74	39	—	—	55	36	71	23	50	23	66	31				
21	63	28	67	25	61	45	67	38	70	38	77	38	—	—	62	26	69	24	56	20	64	30				
22	50	36	51	36	70	23	73	43	76	33	61	45	—	—	68	42	72	25	62	25	62	36				
23	45	38	45	40	56	19	64	40	65	40	64	43	63	21	61	42	64	26	59	38	44	40				
24	50	33	52	36	65	32	61	37	68	35	68	40	62	20	51	35	65	21	61	30	53	35				
25	56	38	60	36	55	22	67	39	70	36	71	38	59	23	63	33	64	23	57	25	59	32				
26	54	34	58	30	64	25	70	39	76	35	74	39	65	29	66	33	64	24	60	31	59	31				
27	62	35	67	35	64	35	75	41	78	37	75	40	66	28	70	37	67	29	64	36	66	32				
28	61	31	63	38	71	50	73	46	75	41	78	39	67	29	69	33	65	31	64	36	62	35				
29	61	29	68	29	70	27	75	48	78	42	79	41	71	32	73	33	68	33	68	33	69	36				
30	69	31	88	32	75	26	85	47	87	44	79	45	70	28	79	40	66	31	72	29	78	38				
Mns..	60.2	36.5	63.9	36.5	65.5	32.3	70.2	45.2	—	74.0	43.5	73.8	45.4	63.9 ^c	33.9 ^b	—	65.7	39.1	66.9	29.5	—	63.3	33.2	63.9	37.2	

Date.	Washington.														Tatoosh Island.													
	Aberdeen.		Blaine.		Colville.		Kosmos.		Lakeside.		North Head.		North Yakima.		Odessa.		Port Crescent.		Seattle.		Sixprong.		Spokane.		Tacoma.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		
1	58	50	58	51	64	42	65	48	67	47	59	55	68	41	65	38	56	45	58	52	76	53	61	46	60	52	56	51
2	62	46	59	50	63	49	61	46	68	52	68	50	68	53	63	43	56	40	60	49	67	61	50	59	49	56	49	
3	63	41	60	38	64	46	66	41	66	43	58	48	68	37	64	40	55	37	61	45	67	62	46	52	58	48		
4	64	38	64	38	65	32	63	38	72	42	58	50	69	41	61	34	57	39	61	45	70	42	62	38	59	52		
5	63	48	68	42	68	38	60	40	69	44	60	53	68	39	66	42	62	43	64	49	65	45	64	45	60	53		
6	64	52	62	51	67	43	62	48	62	53	59	54	62	52	69	55	57	47	61	53	65	51	62	53	57	54		
7	60	50	62	53	60	51	58	55	70	51	59	53	66	45	66	51	58	47	60	52	61	59	52	60	54			
8	64	48	62	53	71	42	63	50	72	50	60	54	72	40	70	45	60	43	64	54	69	49	64	66	52			
9	62	43	67	42	75	38	69	49	76	47	61	53	74	40	71	39	61	40	68	52	72	43	65	48				
10	78	47	69	82	87	52	82	49	81	58	78	46	78	42	67	42	71	53	74	46	75	52	72	46				
11	85	58	72	60	84	37	84	44	81	51	70	59	81	48	83	43	69	46	77	52	80	50	79	46	78	53		
12	70	45	72	45	85	38	81	43	88	52	60	55	86	48	85	43	63	40	75	52	83	53	80	48	74	51	58	
13	82	47	59	47	80	37	83	45	87	55	75	53	86	54	89	44	78	46	76	55	88	58	82	50	75	54		
14	79	55	59	50	71	36	77	56	78	50	77	68	82	54	88	47	72	46	79	61	87	55	85	57				
15	80	53	62	40	74	28	81	55	74	41	77	58	74	51	73	45	69	43	80	59	82	53	83	43	78	56		
16	76	49	60	40	75	29	72	39	77	42	61	58	77	41	78	39	65	44	68	54	80	50	74	36	68	49		
17	74	47	62	48	77	34	72	54	78	50	58	55	77	37	57	44	64	42	67	55	78	49	74	42	66	56		

TABLE 3.—*Maximum and minimum temperatures for September, 1912. District No. 12—Continued.*

Date.	Walla Walla, Wash.		Oregon.																			
			Ashland.		Baker.		Eugene.		Gold Beach.		Hermiston.		Marshfield.		Portland.		Prineville.		Roseburg.		The Dalles.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.	69	52	71	49	63	40	68	48	68	51	73	53	68	49	67	54	69	52	73	45	73	45
2.	65	54	59	46	66	45	61	47	66	50	66	56	63	51	59	50	58	49	74	48	74	48
3.	66	50	56	44	55	40	62	50	65	50	67	53	65	49	65	47	62	48	78	47	78	47
4.	66	47	66	47	55	41	64	51	61	48	70	43	62	44	66	44	68	51	58	46	58	46
5.	71	49	57	49	59	38	62	49	60	51	75	42	58	53	63	53	62	51	70	37	70	37
6.	70	53	52	45	66	45	64	50	62	50	70	57	64	51	69	55	62	52	74	54	74	54
7.	66	52	63	45	59	44	62	52	64	51	71	55	62	50	63	55	66	50	71	50	71	50
8.	70	54	65	47	60	40	67	53	64	51	73	48	68	52	66	55	68	50	71	39	71	39
9.	75	50	72	43	65	36	69	47	72	52	78	42	74	44	73	48	74	46	75	47	75	47
10.	77	51	82	42	72	37	72	50	72	52	84	41	84	44	84	54	84	49	79	39	79	39
11.	82	56	79	43	74	41	78	54	69	56	85	41	82	49	84	55	87	50	84	37	84	37
12.	85	60	81	48	74	42	80	57	68	50	87	44	82	51	81	53	85	49	83	40	83	40
13.	84	61	85	52	75	41	81	56	68	50	88	46	80	54	84	58	88	52	86	41	86	41
14.	76	51	86	55	65	33	78	54	64	50	84	50	70	48	78	65	88	53	80	39	80	39
15.	78	45	83	58	64	34	72	50	62	54	80	36	64	49	81	62	87	48	71	34	71	34
16.	80	46	74	51	73	34	75	52	67	57	89	42	66	55	66	55	64	57	75	24	75	24
17.	78	55	70	54	74	36	76	53	72	54	80	52	66	52	72	58	71	50	84	29	84	29
18.	82	56	79	47	80	41	78	53	80	60	86	42	66	50	73	55	78	47	84	37	84	37
19.	73	50	83	48	63	43	76	51	73	54	77	45	71	44	76	46	75	44	73	53	73	53
20.	75	46	85	59	65	33	79	54	62	47	88	32	79	44	78	53	85	45	73	36	73	36
21.	78	48	84	52	70	31	78	53	56	46	80	31	68	42	82	53	86	46	75	24	75	24
22.	71	53	81	50	62	37	76	47	61	46	76	41	66	49	70	50	76	47	71	25	71	25
23.	66	50	72	47	54	32	68	42	66	47	71	56	67	39	62	47	67	43	71	27	71	27
24.	67	47	73	41	56	30	70	44	68	51	76	51	69	40	68	42	70	40	67	34	67	34
25.	73	50	78	44	66	26	71	44	80	60	76	31	66	39	69	44	78	39	70	23	70	23
26.	79	46	85	46	68	33	74	45	68	50	80	35	80	37	76	48	82	41	76	30	76	30
27.	75	44	66	54	70	35	73	45	64	49	78	35	66	46	79	52	73	49	83	30	83	30
28.	73	45	72	50	69	34	74	47	63	52	74	34	67	51	78	53	65	54	77	32	77	32
29.	72	49	75	49	73	37	76	49	67	49	76	34	70	45	72	54	76	50	78	34	78	34
30.	74	50	69	49	77	38	70	44	62	51	76	39	66	46	65	55	62	47	84	30	84	30
Mean.....	73.9	50.7	73.4	48.5	66.4	37.4	71.8	49.7	66.5	51.2	77.8	43.8	69.3	47.1	72.3	52.4	73.9	48.3	75.6	37.4	75.6	37.4

•, b, c, etc., indicate respectively 1, 2, 3, etc., days missing from the record.

§ § Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.